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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/531,633

03/21/2000

Zhe Li

6773

7590

01/22/2004

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1 Argent Drive

Poughkeepsie, NY 12603

EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT

PAPER NUMBER.

2123

DATE MAILED: 01/22/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/531,633

Applicant(s)

LI, ZHE

Examiner

Eduardo Garcia-Otero

Art Unit

2123

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 08 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-17.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: See Attachment.

*Hugh Jones*  
HUGH JONES PHD.  
PRIMARY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

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## ADVISORY ACTION

### *Introduction*

Title is: METHOD FOR CONDITIONAL TAUTOLOGY CHECKING

First named inventor is: LI.

Claims 1-17 have been submitted, examined, and rejected.

Priority is claimed to provisional application 60/125,835 filed 3/24/1999.

This Advisory action is in response to Applicant's Amendment B, received 1/8/04 (which is in response to the Final Office Action).

Applicant's Amendment B is entered.

### *Index of Prior Art*

**Simpson** refers to US Patent 5,642,304.

**Okuzawa** refers to US Patent 5,243,538.

**Tucker** refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, CRC Press, ISBN: 0-8493-2909-4, 1996.

### *Applicant's Remarks*

The Examiner will follow Applicant's numbering system.

(1) and (2). Regarding claim 1, Applicant asserts that the three elements "Boolean function, a Boolean constant and a subset of input space" are "novel physical features" not taught by the cited prior art Okuzawa's "Boolean Expression" and Truth Table" in FIG 1, and "Comparison". These assertions are not persuasive, as previously discussed. A detailed discussion of the prior art disclosing each limitation was provided in the prior office action.

(3). Regarding Tucker's "divide and conquer". Applicant asserts that Tucker is directed at parallel techniques, and "does not disclose anything related to Boolean functions, Boolean constants, subsets of input space...". However, Tucker's "divide and conquer" technique may be clearly applied in breaking up the input space of a large problem into subsets of said input space, which may be processed in parallel. Tucker's "divide and conquer" problem may even simplify portions of the problem (in addition to allowing parallel processing) if the subsets are selected in a rational way, for example to allow Boolean simplifications.

(4). Applicant asserts that the dividing step of claim 1 yields new and unexpected results.

However, the division of input space into simpler subsets appears well known in the art. Note

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that the cited prior art is interpreted in the view of one of ordinary skill in the art. Specifically, *In re Preda*, 401 F.2d 825, 159 USPQ 342, 344 (CCPA 1968) states “in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” For example, one of ordinary skill in the art would interpret the cited prior art in the view of well known Boolean input space divisional techniques such as Boolean minimization using theorems, or using Karnaugh map graphical techniques. Note that Karnaugh maps order and display the minterms in a geometrical pattern such that the application of the logic adjacency theorem becomes obvious.

(5). Applicant asserts that “none of the references suggest any combination”. However, explicit suggestion of a combination in the references is not required. MPEP 706(j) states “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings... To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention **or the examiner must present a convincing line of reasoning** as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” Emphasis added. Citing *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See also MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections. The Examiner has presented a convincing line of reasoning in the prior office action.

(6) and (7). Applicant further unpersuasively asserts “novel features” over Okuzawa. A detailed discussion of the prior art disclosing each limitation was provided in the prior office action.

### ***Conclusion***

Applicant's Amendment B is entered.

All pending claims are rejected under 35 USC 103, the claims have not been amended, and the rejections have not been rejected.

### ***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 7:00 PM. If

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attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone number for this group is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

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